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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,524	10/06/2000	Joseph B. Rowlands	5580-00600	2296

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GARLICK HARRISON & MARKISON LLP  
P.O. BOX 160727  
AUSTIN, TX 78716-0727

EXAMINER

HUYNH, KIM T

ART UNIT	PAPER NUMBER
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2112

14

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/680,524

Applicant(s)

ROWLANDS ET AL.

Examiner

Kim T. Huynh

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15-48 and 51-62 is/are rejected.
- 7) ☒ Claim(s) 13, 14, 49 and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-12, 15-48, 51-62 are rejected under 35 U.S.C. 102(e) as being anticipated by Cho et al. (US Patent 6,678,767)

As per claims 1, 37, Cho discloses a system comprising:

- a first agent configured to generate a first signal, wherein said first signal is indicative, in a first state, that said first agent is available to participate in subsequent transactions, and wherein said first signal is indicative, in a second state, that said first agent is unavailable to participate in subsequent transactions; and (col.9, lines 3-32)
- a second agent coupled to receive said first signal, wherein said second agent is configured to initiate a first transaction for which said first agent is a participant responsive to said first signal being in said first state, and wherein said second agent is configured to initiate a second transaction for which said first agent is a non-participant responsive to said first signal being in said second state. (col.9, lines 3-32)

As per claims 2, 38, Cho discloses wherein said second agent is configured to inhibit initiating said first transaction if said first signal is in said second state.

(col.9, lines 3-32)

As per claims 3, 39, Cho discloses wherein said first agent is said participant in said first transaction if said first agent is targeted by said first transaction. (col.9, line 33-col.10, line 12)

As per claims 4, 40, Cho discloses wherein said first agent is said participant in said first transaction if said first agent includes an internal cache to be snooped in response to said first transaction. (col.6, lines 42-50)

As per claims 5, 41, Cho discloses wherein said first agent is said participant in said first transaction if said first agent is a cache and said first transaction is cacheable. (col.9, lines 54-62)

As per claims 6, 42, Cho discloses wherein said second agent is configured to inhibit initiating said first transaction by preventing arbitration for a bus on which said first transaction is to be transmitted. (col.9, lines 3-32)

As per claims 7, 43, Cho discloses wherein said second agent is configured to inhibit initiating said first transaction by transmitting an invalid command if said second agent wins an arbitration for a bus on which said first transaction is to be transmitted. (col.9, lines 13-44)

As per claims 8, 44, Cho discloses wherein said first agent comprises a queue configured to store transactions until the transactions are acted upon by said first

agent, and wherein said first agent is configured to generate said first signal responsive to number of free entries of said queue. (col.4, lines 8-45)

As per claims 9, 45, Cho discloses wherein said first agent is configured to generate said first signal in said second state responsive to 1 or fewer entries being free. (col.4, lines 8-45)

As per claims 10, 46, Cho discloses the system further comprising a third agent configured to generate a second signal indicative, in a first state, that said third agent is available to participate in subsequent transactions, and indicative, in a second state, that said third agent is unavailable to participate in subsequent transactions, and wherein said second agent is coupled to receive said second signal, and wherein said third agent is a non-participant in said second transaction, and wherein said second agent is configured to initiate said second transaction even if said second signal is in said second state. (col.9, lines 3-32)

As per claims 11, 47, Cho discloses wherein said second agent is configured to inhibit initiating a third transaction in which said third agent is a participant if said second signal is in said second state. (col.9, lines 3-32)

As per claims 12, 48, Cho discloses the system further comprising a third agent, wherein said first agent is configured to assert said first signal in said second state if said first agent is unavailable to participate in subsequent transactions, and wherein said third agent is configured to assert said first signal in said second state if said third agent is unavailable to participate in additional transactions. (col.9, lines 3-32)

As per claims 15, 51, Cho discloses the system further comprising a third agent, and wherein said first agent is configured to generate a second signal indicative, in a first state, that said first agent is available to participate in subsequent transactions and indicative, in a second state, that said first agent is available to participate in subsequent translations, and wherein said third agent is coupled to receive said second signal, and wherein said third agent is configured to initiate a third transaction in which said first agent is a non-participant even if said second signal is in said second state.(col.9, lines 3-32)

As per claims 16, 52, Cho discloses wherein said first agent is configured to generate said first signal in said first state and to concurrently generate said second signal in said second state. (col.7, lines 20-39), wherein pipelining implies concurrently configuring)

As per claims 17, 53, Cho discloses wherein said first transaction includes an address, and wherein said second agent is configured to determine if said first agent is a participant in said first transaction by decoding at least a portion of said address. (col.9, lines 45-62)

As per claims 18, 54, Cho discloses an agent comprising:

- a first storage location configured to store a transaction to be initiated by said agent; and (col.9, lines 33-62)
- a circuit coupled to said first storage location and coupled to receive a first signal indicative of whether or not a second agent is available to participate in transactions, and wherein said circuit is configured to

selectively inhibit initiation of said transaction if said first signal indicates that said second agent is unavailable to participate in transactions, dependent on whether or not said second agent is a participant in said transaction. (col.9, lines 3-32)

As per claims 19, 55, Cho discloses wherein said circuit is configured to inhibit initiating said transaction if said second agent is a participant in said transaction. (col.9, lines 3-32)

As per claims 20, 56, Cho discloses wherein said circuit is configured to inhibit arbitration for a bus to initiate said transaction responsive to said first signal indicating that said second agent is unavailable to participate in transactions if said second agent is said participant in said transaction. (col.9, lines 3-32)

As per claims 21, 57, Cho discloses wherein said circuit is configured to perform an invalid command on a bus if said agent wins an arbitration for said bus to initiate said transaction, responsive to said first signal indicating that said second agent is unavailable to participate in transactions and said second agent is a participant in said transaction. (col.9, lines 3-32)

As per claims 22, 58, Cho discloses wherein said circuit is configured to determine that said second agent is said participant in said transaction by decoding at least a portion of an address of said transaction. (col.9, lines 45-62)

As per claims 23, 59, Cho discloses wherein said circuit is configured to initiate said transaction if said second agent is a non-participant in said transaction. (col.9, lines 3-32)

As per claims 24, 60, Cho discloses wherein said circuit is configured to determine that said second agent is a non-participant in said transaction by decoding at a portion of an address of said transaction. (col.9, lines 45-62)

As per claims 25, 61, Cho discloses the agent further comprising a queue including said first storage location, wherein said queue is configured to store a plurality of transactions to be initiated by said agent. (col.9, lines 33-62)

As per claim 26, 62, Cho discloses wherein said circuit is coupled to receive a second signal indicative of whether or not a third agent is available to participate in transactions, and wherein said circuit is configured to selectively inhibit initiation of said transaction if said second signal indicates that said third agent is unavailable to participate in transactions, dependent on whether or not said third agent is a participant in said transaction. (col.9, lines 3-32)

As per claim 27, Cho discloses a method comprising:

- receiving a first signal indicative of whether or not a first agent is available to participate in subsequent transactions; and (col.9, lines 3-32)
- selectively inhibiting initiation of a transaction if said first signal indicates that said first agent is unable to participate in subsequent transactions, dependent on whether or not said first agent is a participant in said transaction. (col.9, lines 3-32)

As per claim 28, Cho discloses wherein said selectively inhibiting comprises:

- inhibiting initiation of said transaction if said first agent is a participant in said transaction; and (col.9, lines 3-32)



- initiating said transaction if said first agent is a non-participant in said transaction. (col.9, lines 3-32)

As per claim 29, Cho discloses the method further comprising determining if said first agent is said participant in said transaction by decoding an address of said transaction. (col.9, lines 33-62)

As per claim 30, Cho discloses wherein said first agent is said participant in said transaction if said first agent is targeted by said transaction. (col.9, line 33-col.10, 12)

As per claim 31, Cho discloses wherein said first agent is said participant in said transaction if said first agent includes an internal cache to be snooped in response to said transaction. (col.6, lines 42-50)

As per claim 32, Cho discloses wherein said first agent is said participant in said transaction if said first agent is a cache and said transaction is cacheable. (col.9, lines 54-62)

As per claim 33, Cho discloses wherein said inhibiting comprises inhibiting arbitration for a bus on which said transaction is to be initiated. (col.9, lines 3-32)

As per claim 34, Cho discloses wherein said inhibiting comprises transmitting an invalid command on a bus on which said transaction is to be initiated if an arbitration for said bus is won by a second agent to initiate said transaction. (col.9, lines 13-44)

As per claim 35, Cho discloses the method further comprising:

- Receiving a second signal indicative of whether or not a second agent is available to participate in subsequent transactions; and (col.9, lines 3-32)
- Selectively inhibiting initiation of said transaction if said second signal indicates that said second agent is unavailable to participate in transactions, dependent on whether or not said second agent is a participant in said transaction. (col.9, lines 3-32)

As per claim 36, Cho discloses wherein said selectively inhibiting comprises:

- Inhibiting initiation of said transaction if said second agent is a participant in said transaction; and (col.9, lines 3-32)
- Initiating said transaction if said second agent is a non-participant in said transaction. (col.9, lines 3-32)

#### **CLAIMS OBJECTION**

3. Claims 13-14, 49-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art do not teach or suggest wherein first signal is indicative of whether or not a memory transaction is to be issued, and wherein said second transaction is an input/output transaction.

#### ***Response to Arguments***

4. Applicant's arguments filed on 1/2/04 have been fully considered but are moot in view of the new ground(s) of rejection.

a. In response to applicant's argument that Chen does not teach or suggest the agents which participate in a transaction themselves in which one agent responds to the other with a signal informing if the transaction may succeed or not succeed based on the ability of the first agent to respond. As Cho notes at (col.9, lines 3-32), the block signals may be used by agents to indicate a lack of ability to participate in transactions. If an agent cannot accept transactions, it may assert its block signal. Thus, the prior art teaches the invention as claimed, the claims do not distinguish over the prior art as applied.

### **Conclusion**

5. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM- 6:30PM.*

*If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.*

*Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5631.*



Kim Huynh

March 20, 2004

Khanh Dang  
Primary Examiner